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(54) Title: NITRIC OXIDE DONORS FOR INDUCING NEUROGENESIS

(57) Abstract: There is provided a method of promoting neurogenesis by administering a therapeutic amount of a nitric oxide donor compound to a patient in need of neurogenesis promotion. Also provided is a compound for providing neurogenesis having an effective amount of a nitric oxide donor sufficient to promote neurogenesis. A nitric oxide compound for promoting neurogenesis is also provided. Further, a method of augmenting the production of brain cells and facilitating cellular structural and receptor changes by administering an effective amount of a nitric oxide donor compound to a site in need of augmentation is provided. There is provided a method of increasing both neurological and cognitive function by administering an effective amount of a nitric oxide donor compound to a patient.

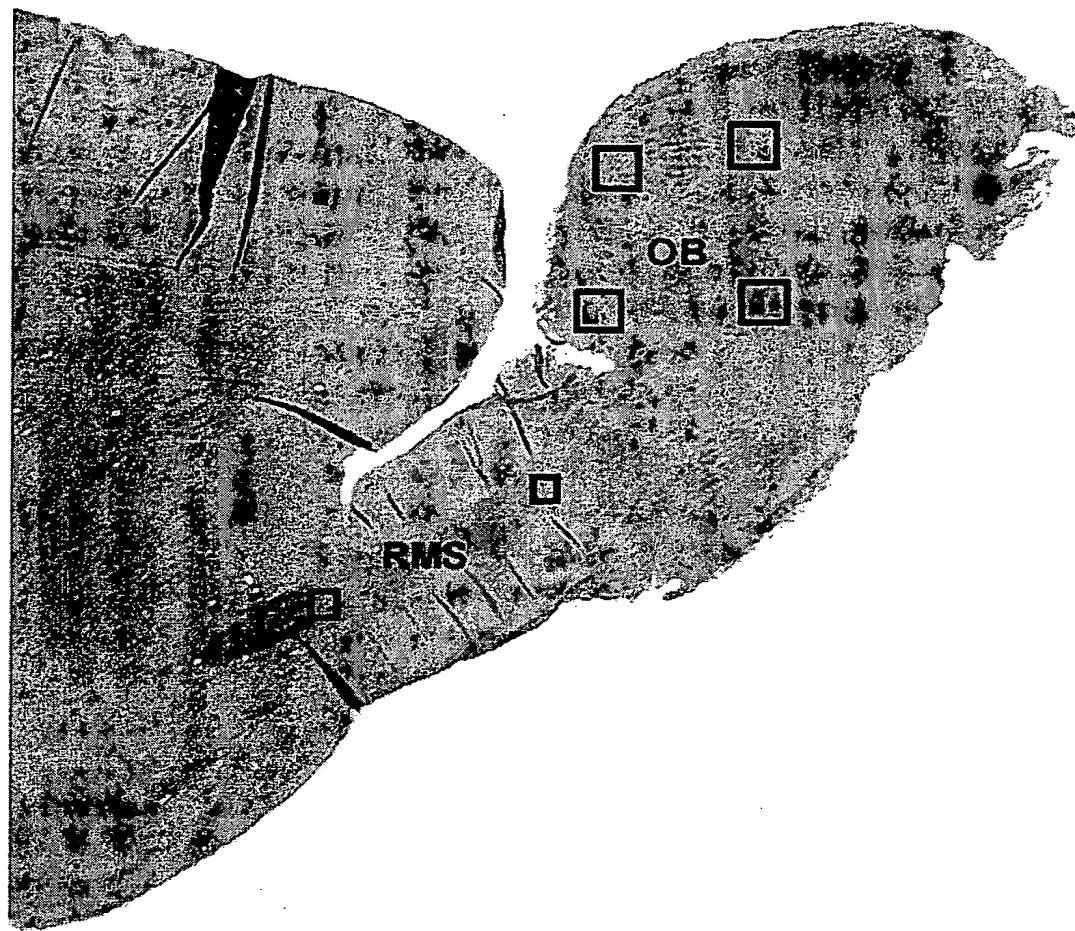
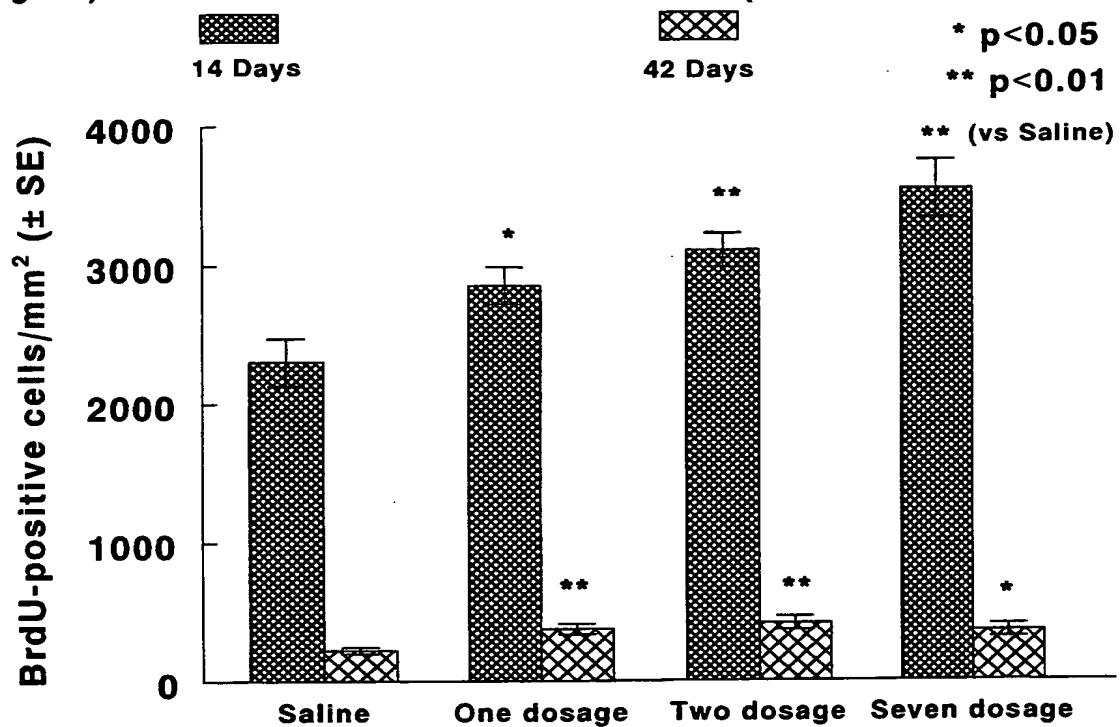


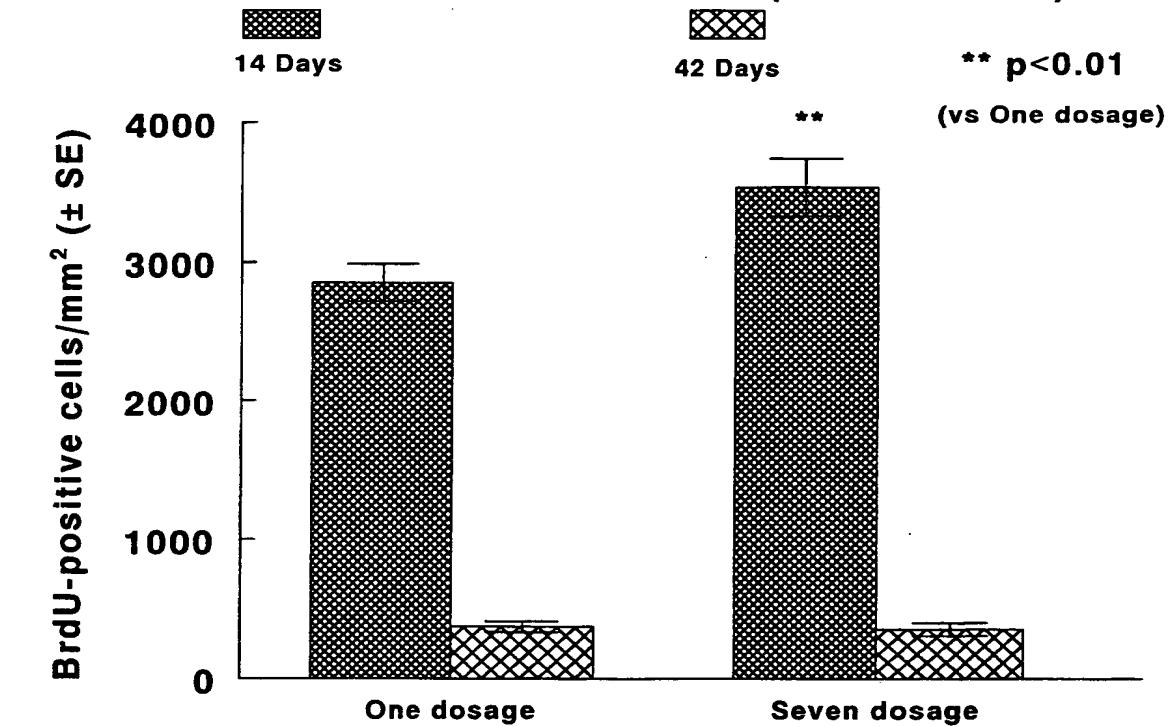
Fig 1.

**CELL PROLIFERATION in SVZ**  
**DETA NONOate STUDY (Non-Ischemia)**

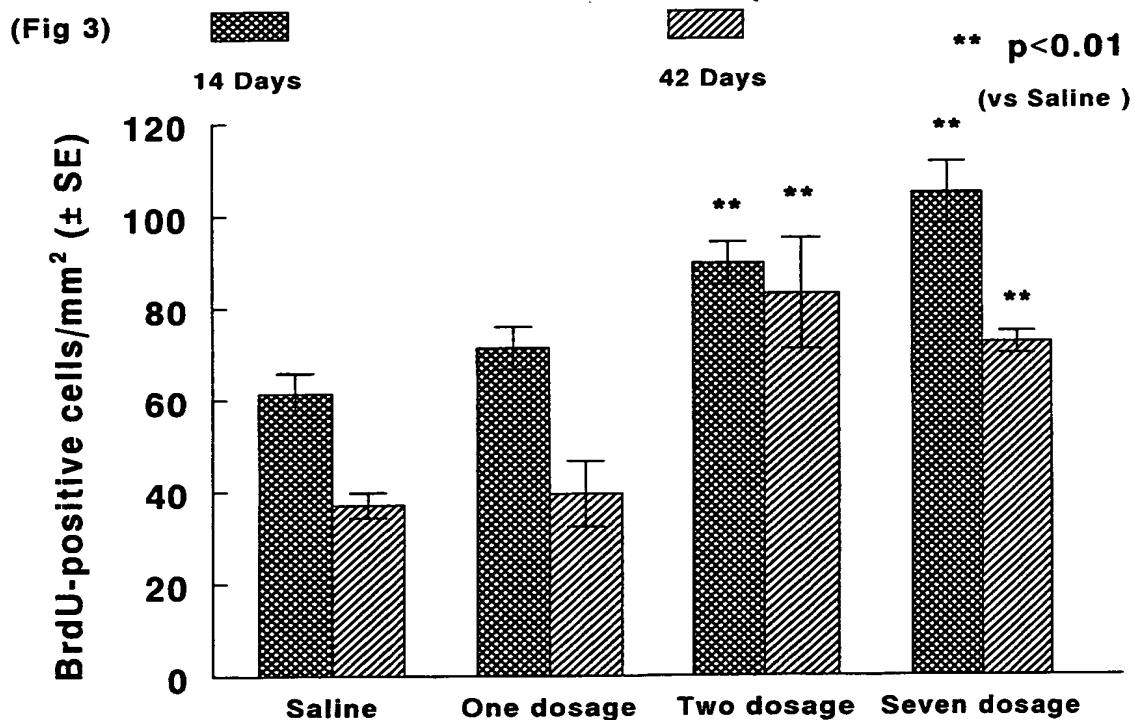
(Fig 2 a)



**CELL PROLIFERATION in SVZ**  
**DETA NONOate STUDY (Non-Ischemia)**



## CELL PROLIFERATION in Dentate Gyrus DETA NONOate STUDY (Non-Ischemia)



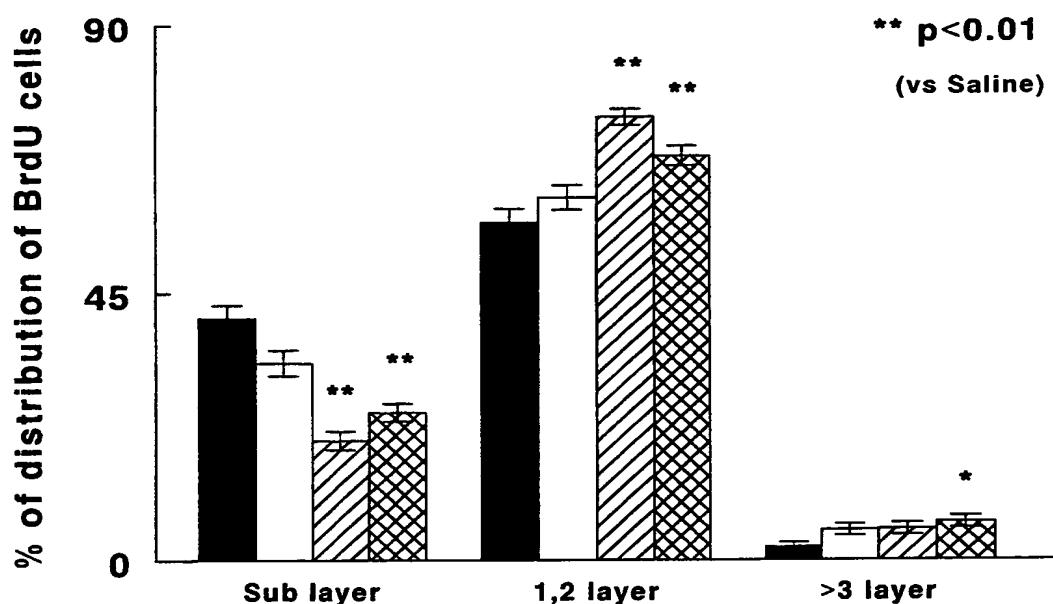
## CELL PROLIFERATION in Dentate Gyrus 14 DAYS

(Fig 4a)      ■ contr    □ one    ▨ two    ▨ seven

\* p<0.05

\*\* p<0.01

(vs Saline)

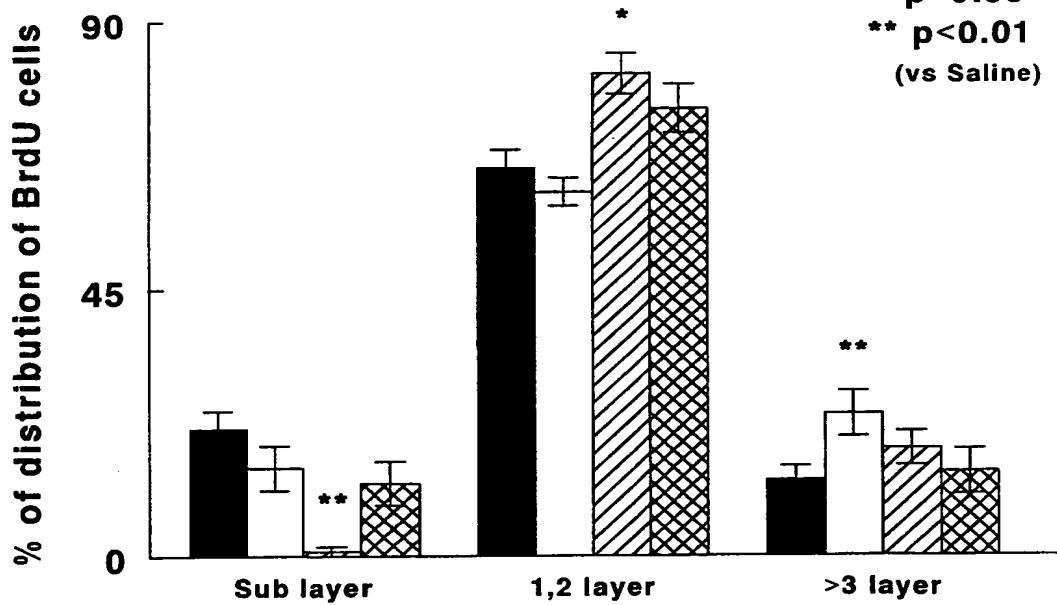


## CELL PROLIFERATION in Dentate Gyrus 42 DAYS

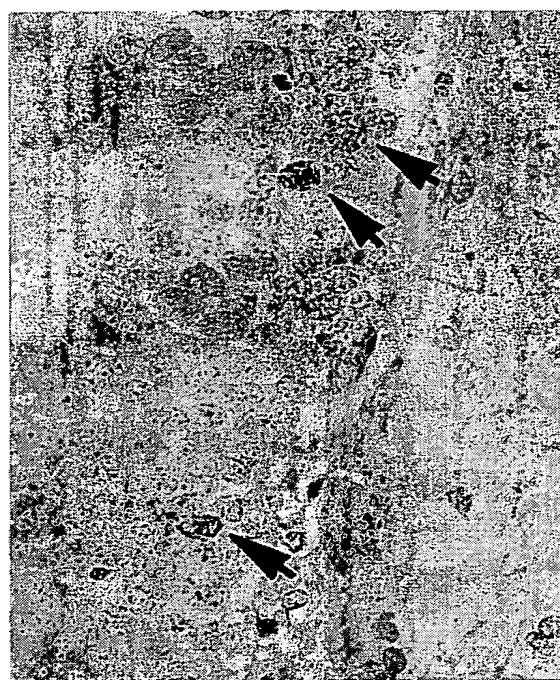
(Fig 4b)

■ contr □ one ▨ two ▨ seven

\* p<0.05  
\*\* p<0.01  
(vs Saline)

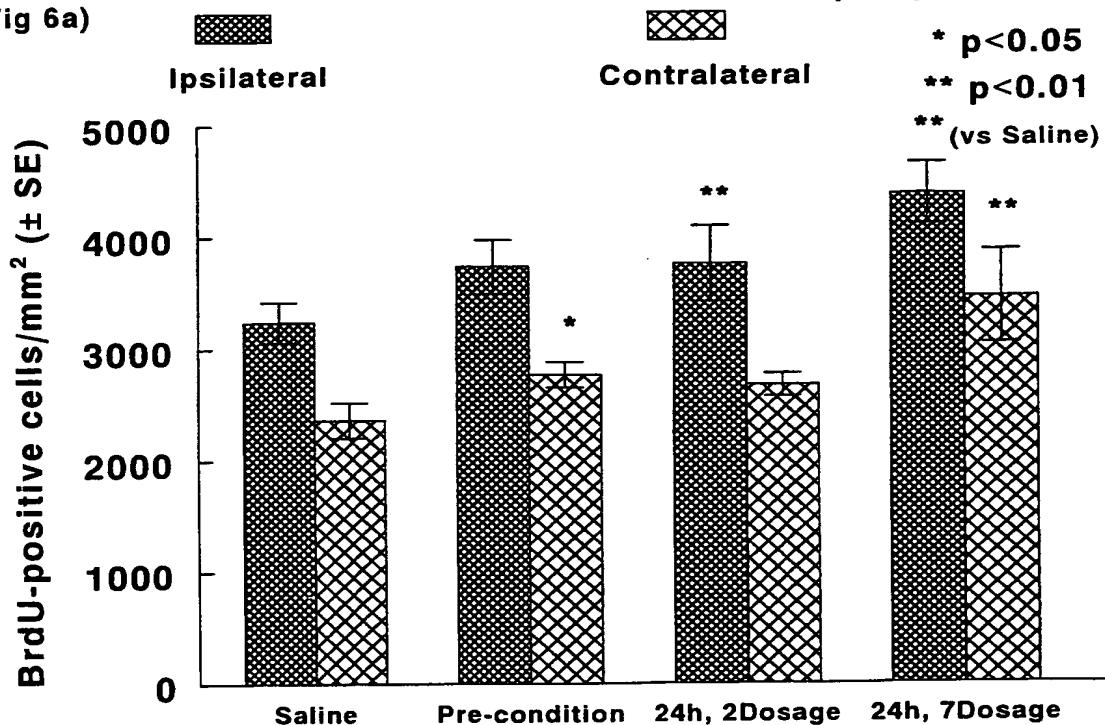


5  
13

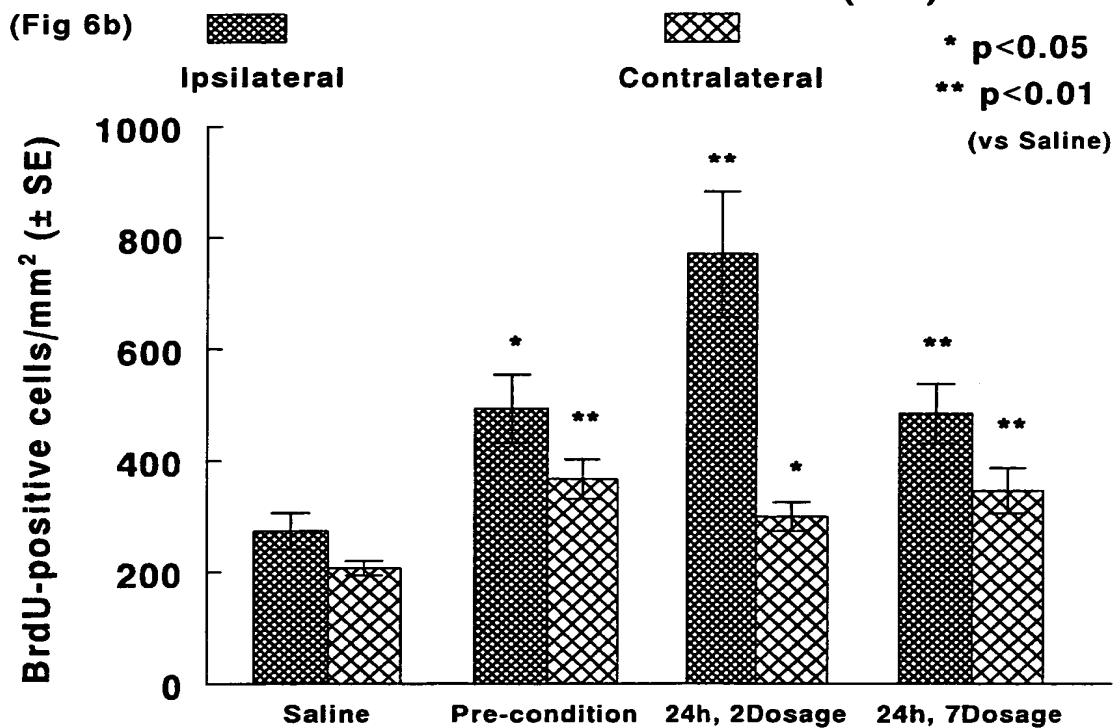


### CELL PROLIFERATION in SVZ DETA NONOate STUDY (14d)

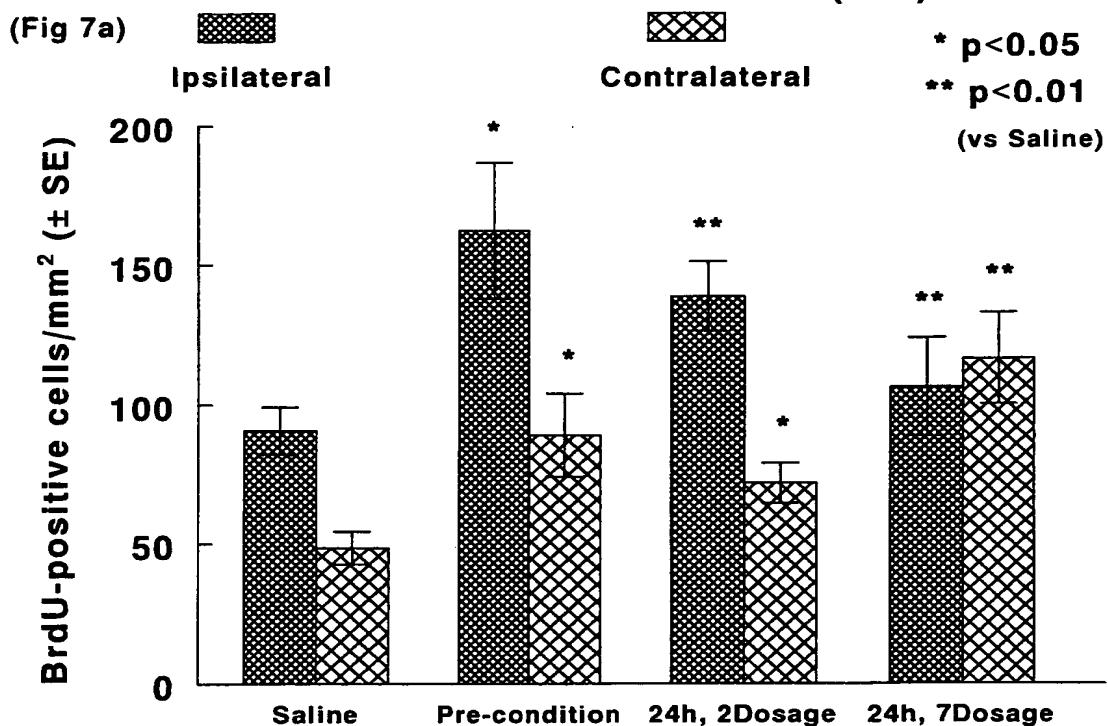
(Fig 6a)



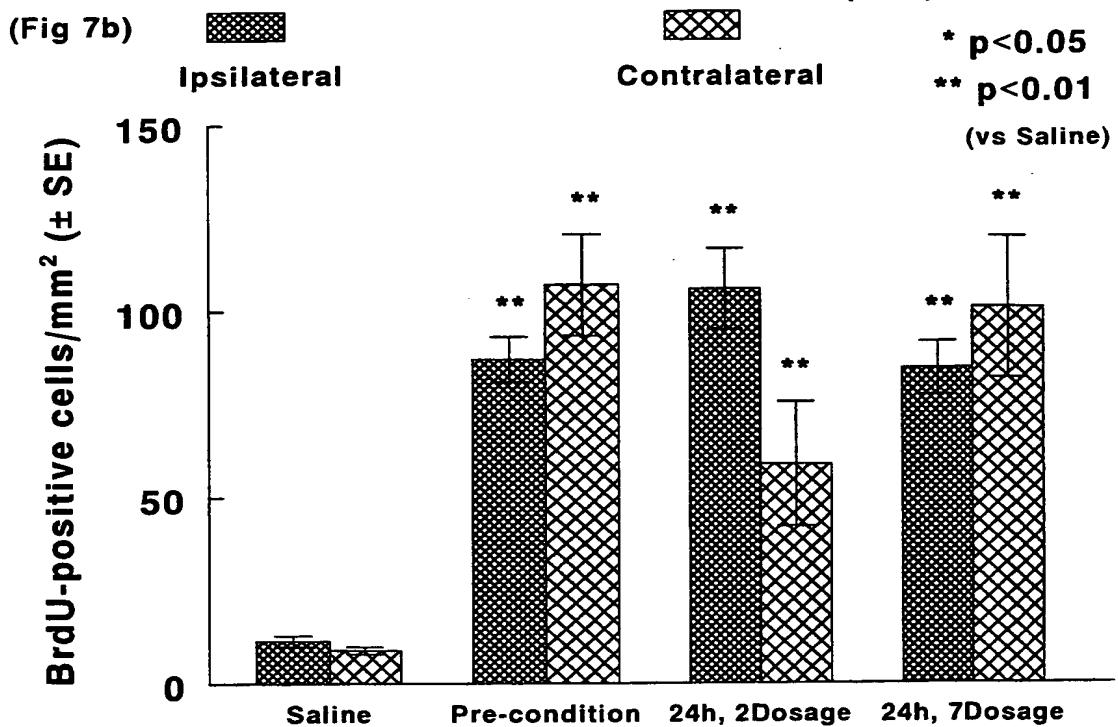
# CELL PROLIFERATION in SVZ DETA NONOate STUDY (42d)



# CELL PROLIFERATION in OB DETA NONOate STUDY (14d)

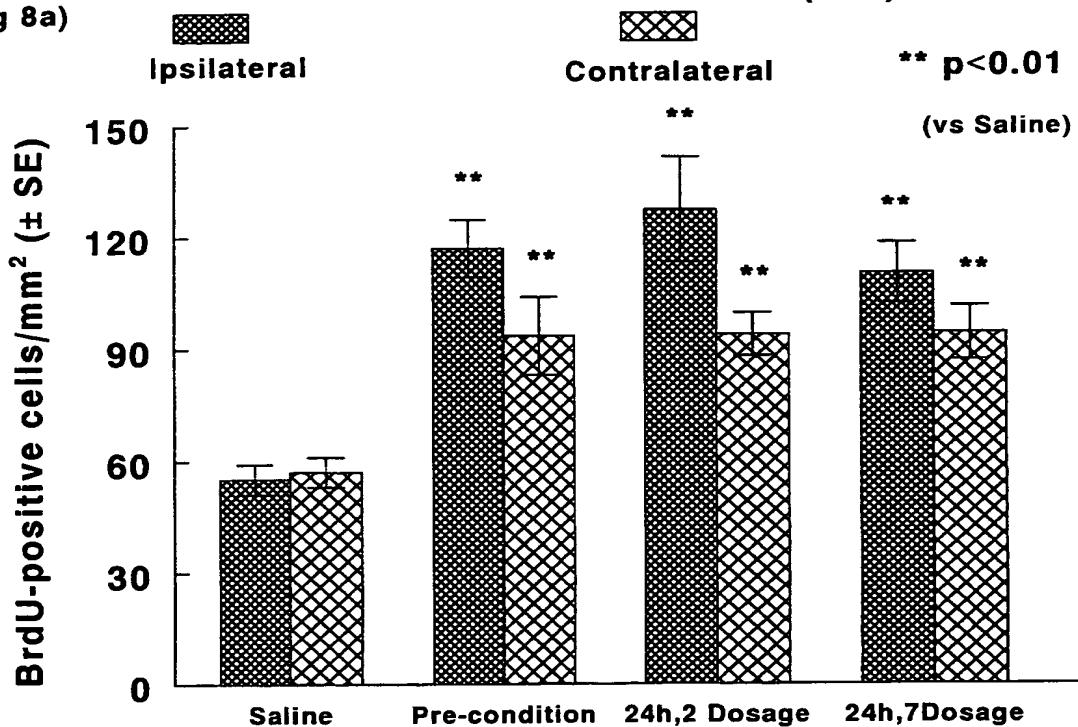


# **CELL PROLIFERATION in OB DETA NONOate STUDY (42d)**

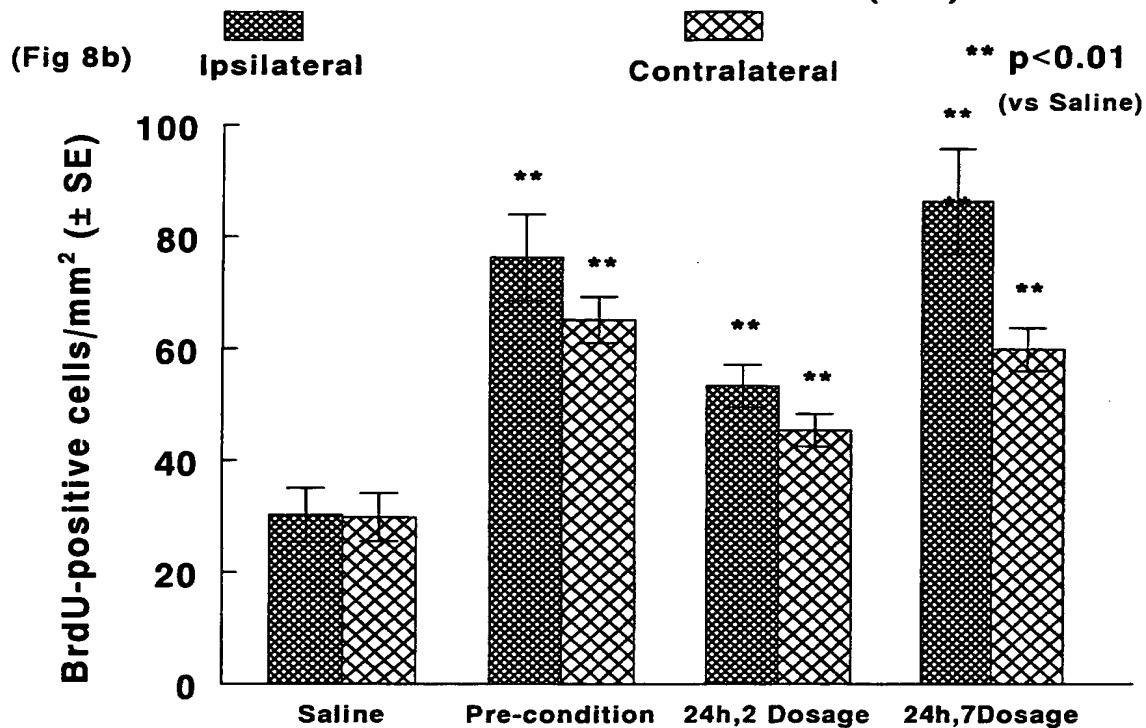


## CELL PROLIFERATION in Dentate Gyrus DETA NONOate STUDY (14d)

(Fig 8a)

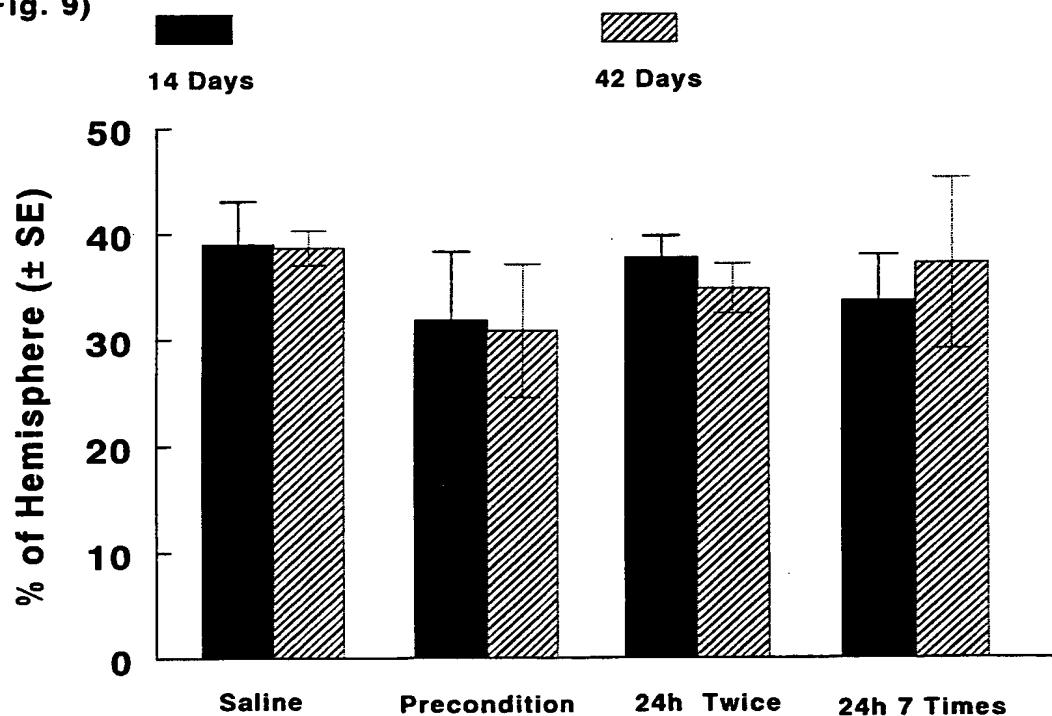


## CELL PROLIFERATION in Dentate Gyrus DETA NONOate STUDY (42d)



## LESION VOLUME DETA NONOATE STUDY

(Fig. 9)



## Adhesive Removal Test

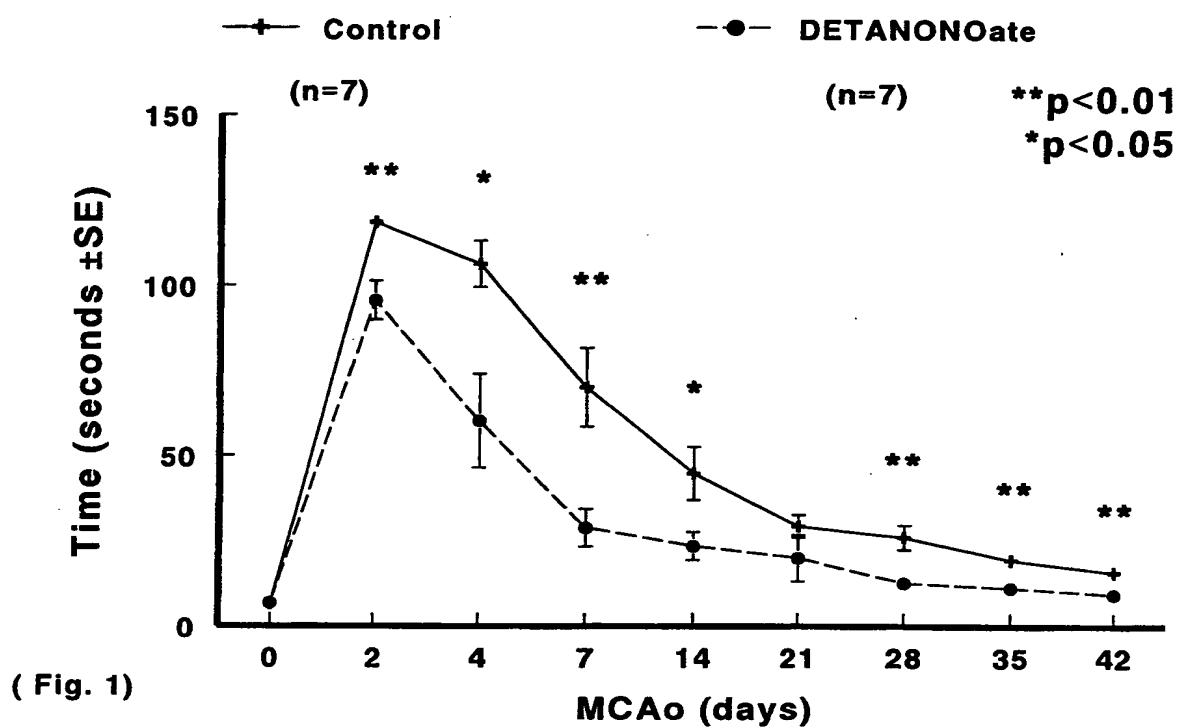
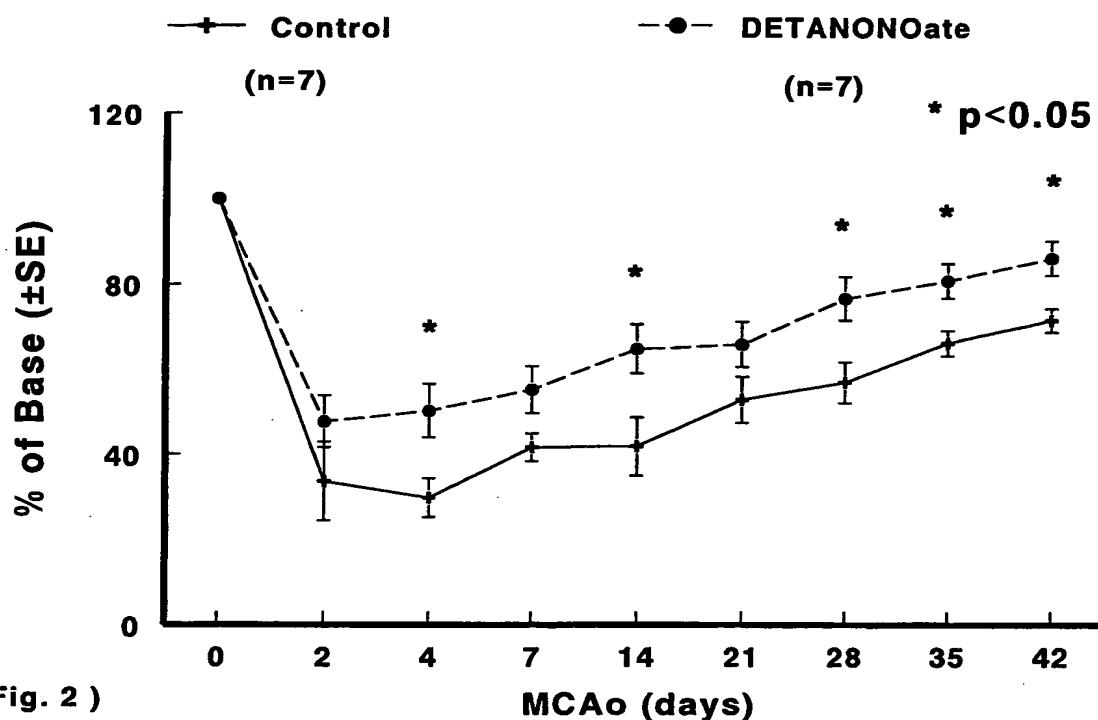


Fig 10

## Rotarod Test



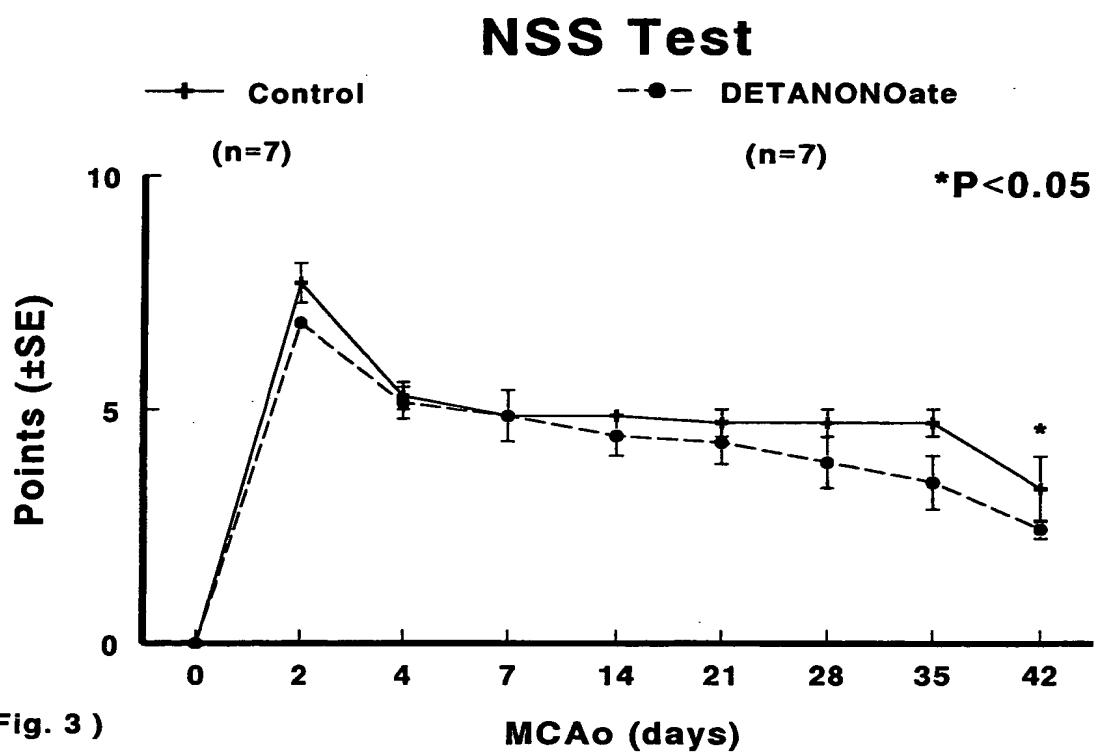
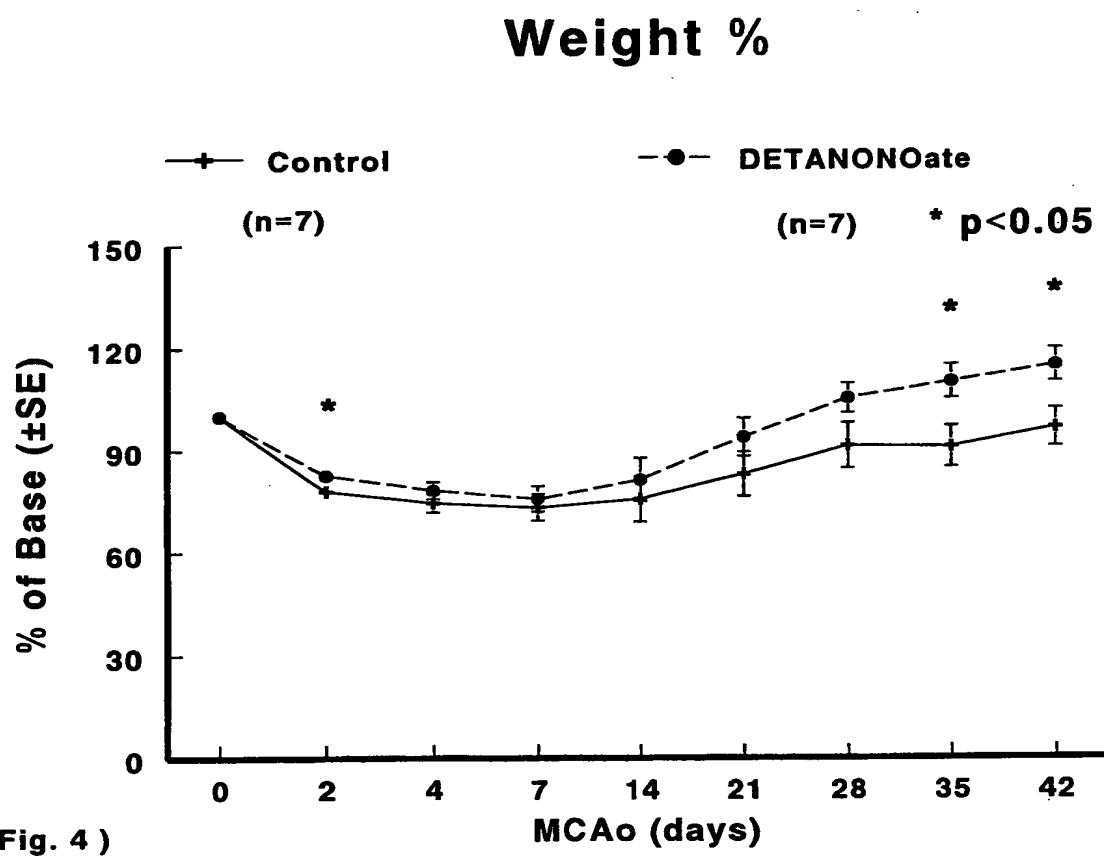
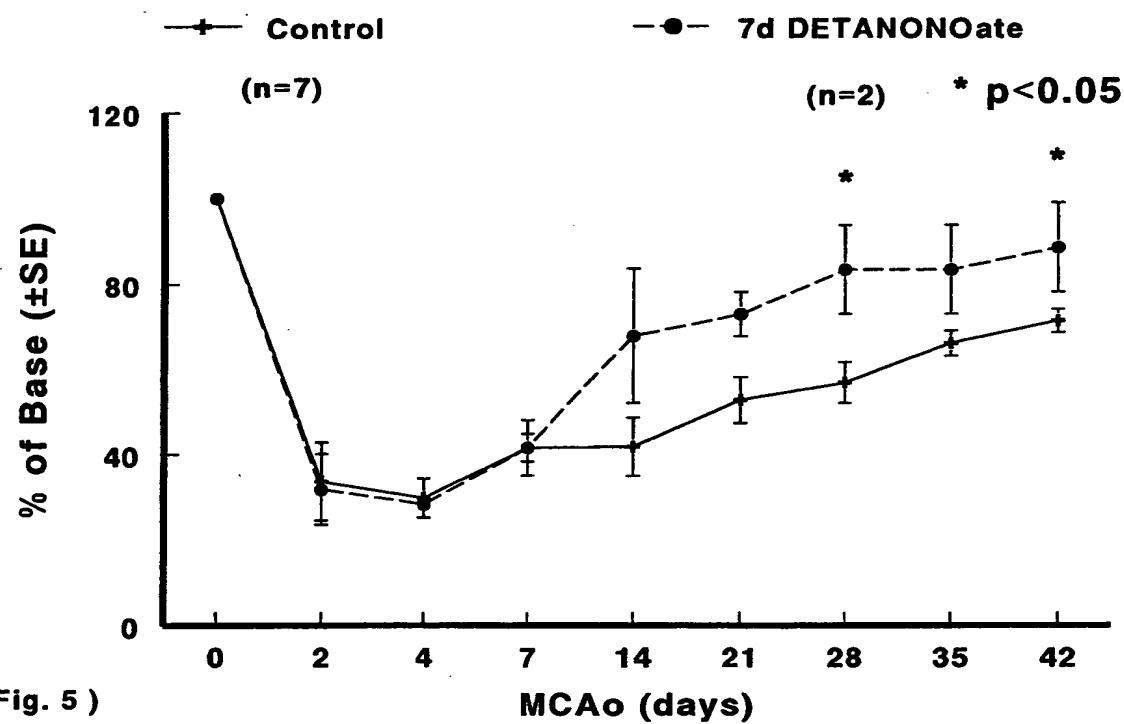


Fig 12



F. S. 3

## Rotarod Test



## Rotarod Test

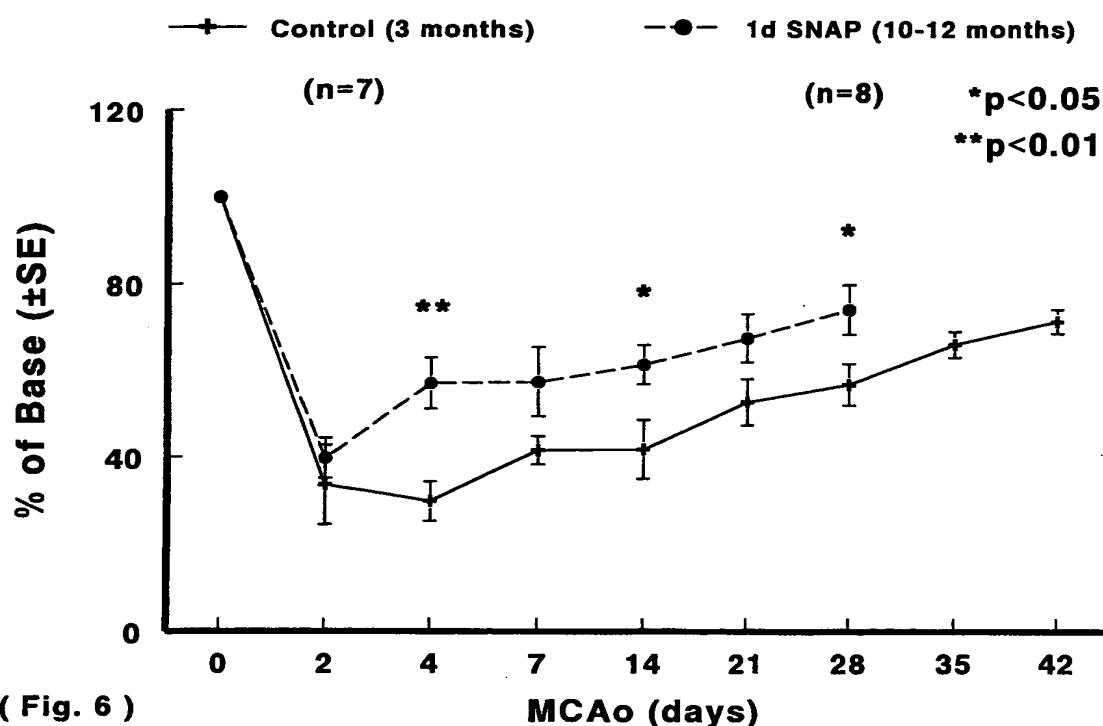


Fig 15

## **Footfault Test**

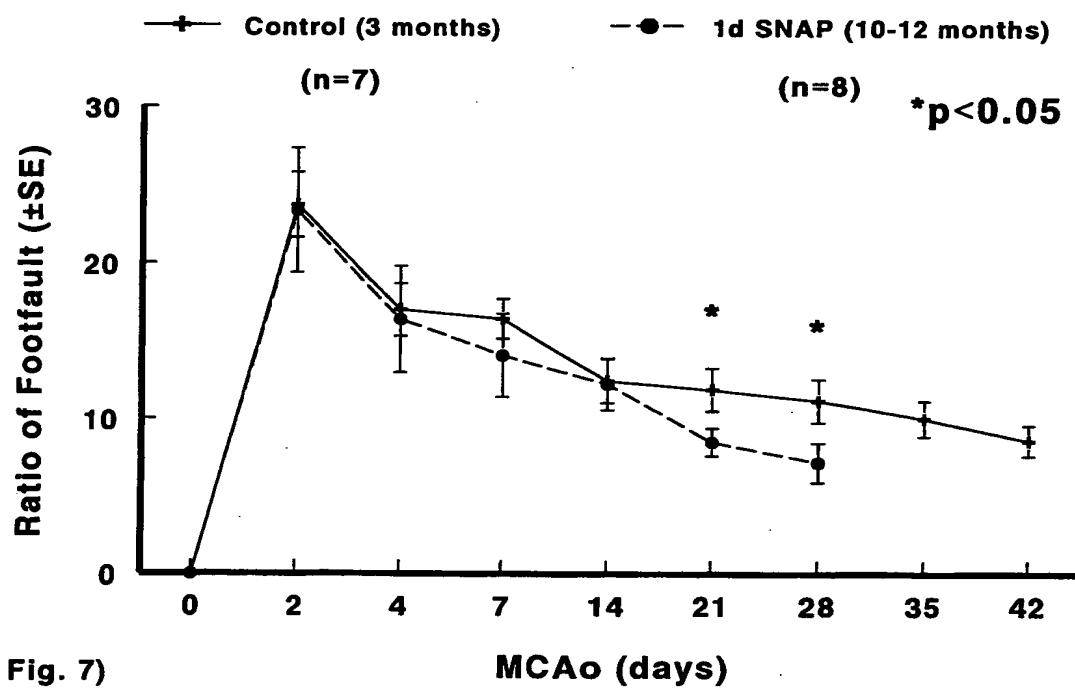


Fig. 1.

## Adhesive Removal Test

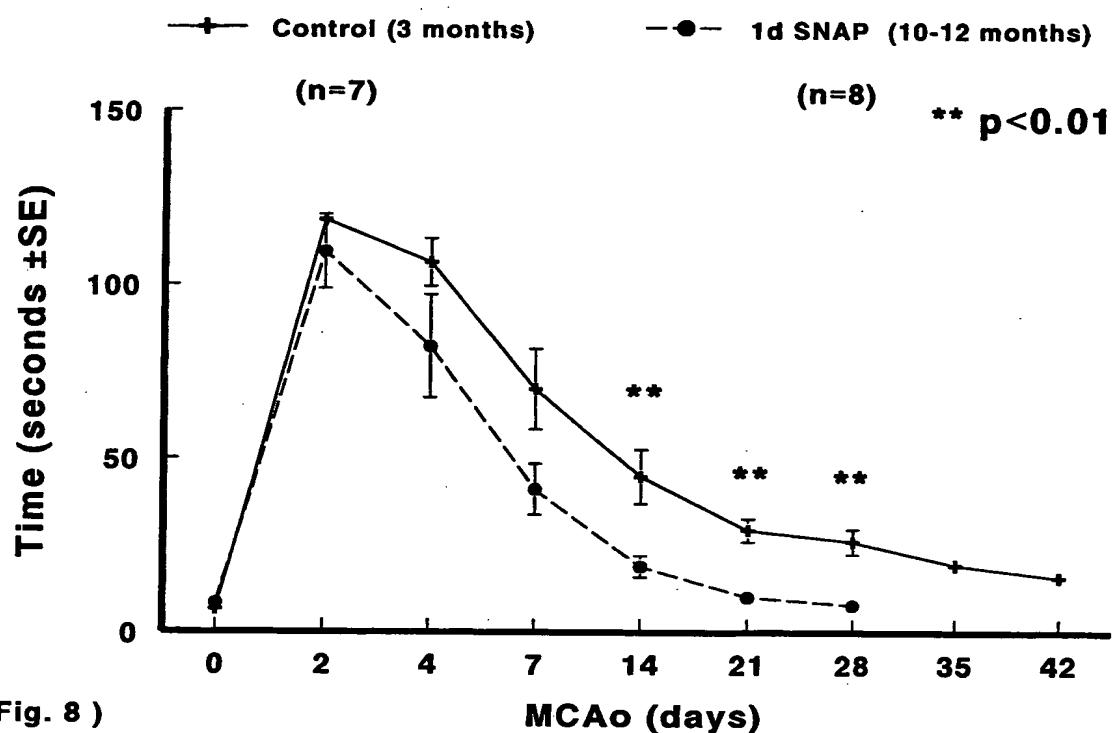


Fig 1)